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communicate with the reel drivers **530-1, 530-2, ... 530-N**, where the single reel interface has logic to independently interact with each reel driver.

[0038] In an embodiment, reel controller **510** includes a peripheral interface **570** to receive information and instructions from a source external to reel controller **510**. Peripheral interface **570** may include a RS485 serial port or other standard serial or parallel port according to its gaming application. In various embodiments, the received information may include information regarding motion parameters for each of the reels **520-1, 520-2, ... 520-N**. Peripheral interface **570** provides a mechanism for the system, gaming machine **500**, to support the ability to download points of interest to processor **540**. These points of interest can be points on a complicated waveform representing a desired spin profile, such as a non-periodic fluctuating waveform with a large number of transitions. This desired profile may be approximated by selectively using points where the slope of the desired waveform goes to zero.

[0039] These points of interest may be stored in reel controller **510** or downloaded to reel controller **510** at run time. Given these points of interest as endpoints for line segments, reel controller **510** may determine the number of steps it needs to lay out between each of those points of interest. These end points may be calculated ahead of time, that is, prior to running game play on game machine **500**. These endpoints for the spin profile may be stored in reel controller **510** or they may be stored with game data. With the spin profile or these endpoints defined by the spin profile stored with game data, reel controller **510** for the stepper motors remains generic and able to adapt to whatever the game is implemented in gaming machine **500**. In an embodiment, instead of storing the waveform values from one step to the next, the data stored includes velocity values and acceleration values, or times that can be used to progress from one velocity to the next.

[0040] FIG. 6 depicts a block diagram of an embodiment of a gaming machine **600** having a gaming module **602** and a central processing unit **605** in which gaming module **602** operates dynamically in response to spin profiles correlated to various games associated with the gaming machine **600**. Central processing unit **605**, CPU **605**, may be realized as a microprocessor or any other processor or control unit. Gaming machine **600** includes data memory **615** that stores various information related to gaming machine **600** including parameters for operating gaming machine **600** to play a number of games. Information stored in data memory **615** may include motion parameters correlated to spinning reel profiles associated with each spinning reel of gaming machine **600** for each game parameter or game modes for which gaming machine **600** is adapted to play. Data memory **615** may be realized as ROM or any other memory device capable of storing game and gaming machine parameters.

[0041] Gaming machine **600** may include, but is not limited to, additional system components such as system ROM **625** and RAM **635** coupled to a data bus **645** and an address bus **655**. Data bus **645** and address bus **655** may be configured in any of various manners to provide a transmission path for communication within gaming machine **600**. Gaming machine **600** may also include peripheral port **675**, a bill validator port **677**, a printer port **679**, as well as additional ports such as host 1 port **681** and host 2 port **683**.

Each additional system component may be associated with an address for control and communication from CPU **605**. Information is transmitted through gaming machine **600** as data via data bus **645** to the various system components identified by an address that is provided on address bus **655**. Gaming machine **600** may be operated similar to a computer system, but is not limited to a configuration in which components are coupled to a data bus and address bus.

[0042] The main control, CPU **605**, for gaming machine **600** is coupled to modules providing visual information to a user, or player, such as payline indicator **680**, credit/win/bet display **690**, and gaming module **602**. Gaming module **602** may be coupled to CPU **605** in various configurations. In an embodiment, gaming module is coupled to CPU **605** by a peripheral bus **676**. Peripheral bus **676** may be coupled to peripheral port **675** that uses data bus **645** and address bus **655** for information flow from the CPU **605** to peripheral bus **676**. Peripheral port **675** may include a RS485 serial port or other standard serial or parallel port according to its gaming application. Payline indicator **680** and credit/win/bet display **690** may also be coupled to peripheral bus **676**. Alternately, gaming module **602** may have an address and may be configured to receive information in coordination with CPU **605** by coupling to data bus **645** and address bus **655**. Alternately, peripheral bus **676** may be coupled to address bus **655** and data bus **645** to transfer information between CPU **605** and reel controller **610**.

[0043] Gaming module **602** includes a number of reels **620-1, 620-2, ... 620-N** each of which includes a number of symbols where at least one symbol per reel is visible to a user at a stop or play position. In an embodiment, gaming module **602** includes five reels. However, gaming machine **600** and/or gaming module **602** are not limited to five reels. Each reel **620-1, 620-2, ... 620-N** is driven by one of a number of reel drivers **630-1, 630-2, ... 630-N**, respectively. Each reel driver **630-1, 630-2, ... 630-N** is responsive to a reel controller **610**. Each reel driver **630-1, 630-2, ... 630-N** may be coupled directly to reel controller **610**, coupled to reel controller **610** through a reel interface that handles a number of reel drivers, or coupled to reel controller through a number of reel interfaces with one reel interface per reel driver.

[0044] In an embodiment, gaming machine **600** has an area in which game data is provided that can be changed according to a given game scenario. Reel controller **610** may be generic with port connection between the main game CPU **605** and reel controller **610** in which reel controller **610** has a DSP to process data provided from CPU **605**. CPU **605** processes system and game information and downloads processed data to reel controller **610**. Reel controller **610** may perform linear interpolation using data from CPU **605** and manages the operation of the stepper motors associated with the reels according to the game profiles for the spinning reels. In an embodiment, reel controller **610** manages five reels simultaneously. Reel controller **610** is not limited to managing five reels but may manage any number of reels.

[0045] In an embodiment, CPU **605** may perform calculations to provide velocity, acceleration, and/or delay time data to reel controller **610** to approximate a control spin reel profile. The control spin reel profile is stored in data memory **615** and correlated to a game or game mode. CPU **605** downloads data to reel controller **610** to drive each reel